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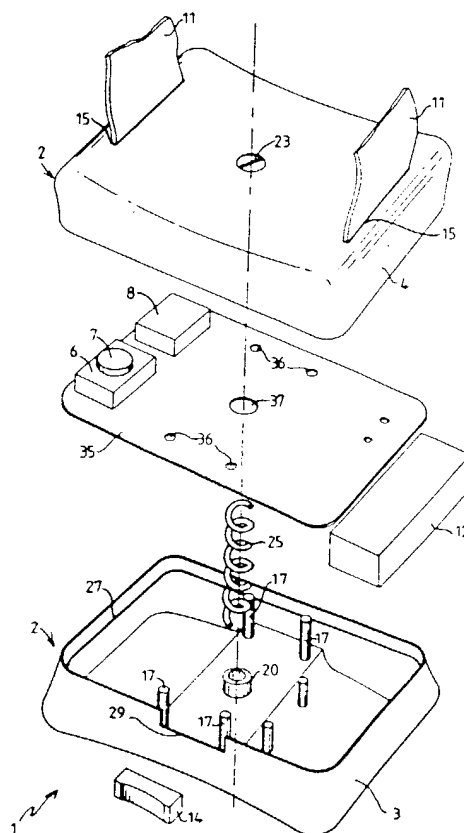


## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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**(54) Title:** GOLF SWING PRACTICE DEVICE**(57) Abstract**

A golf swing practice device comprises a main body (1) which is configured for positioning between the user's power arm and body. The device further includes sensing means (6) and biasing means (25) arranged in an electrical circuit and associated with the main body. When the user's power arm is in the correct position the sensing means (6) adopts either an activated or deactivated position. During the back swing of the golf stroke the sensing means (6) will move into the other position as a result of the power arm moving away from the user's body and thereby the sensing means (6) will activate or deactivate the indicating means (8).



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## GOLF SWING PRACTICE DEVICE

The present invention relates to a golf swing practice device.

The correct positioning of the "power arm" with respect to the body of a golfer during a golf swing is an important aspect of the golf swing. The term "power arm" as used herein means the arm which generates club head speed. In particular the power arm is the right arm of the golfer playing with right handed clubs and the left arm of a golfer playing with left handed clubs. A problem common to many golfers is that the upper portion of the power arm moves too far away from the body during the back swinging of the golf stroke. This can result in a loss of power and control of the golf club head. As such, golfers must make a conscious effort to try and learn to keep the upper portion of the power arm tucked in against the body during swinging.

Applicant has already devised a practice device to assist in learning control of the power arm and this device is the subject of Australian co-pending application 20922/83. While this device is satisfactory it does create some difficulties owing to its relatively large size.

United States patent specification 4,193,065 discloses a device for indicating to a golfer that the golfer's

target control arm is being bent during a golf swing. Essentially the device comprises a movable member which is hingedly connected to a main housing both of which are strapped about the golfer's target control arm so  
5 that hinged or pivotal movement of the member causes a circuit to open and close thereby illuminating a light if the golfer's control arm bends. Whilst this device may be satisfactory for the specific problem of target  
10 arm control it clearly would not be suitable for the problem confronted by applicant in the present invention for reasons which will be apparent from a reading of the following description.

It is an object of the present invention to provide a golf swing practice device which can be used by  
15 a golfer to develop a better golf swing.

According to the present invention there is provided a golf swing practice device which comprises a main body, sensing means operatively carried by said main body and being capable of adopting either an activated  
20 position or a deactivated position, biasing means for causes said sensing means to be normally in one of said activated or deactivated positions and indicating means which provides an indication as to which of said positions said sensing means is in, said sensing means and said  
25 indicating means being arranged in an electrical circuit.

In use the main body is configured for positioning between the inside of the user's upper portion of the power arm and the user's body and when the arm is in the correct position against the user's body the sensing  
30 means adopts either its activated or deactivated position. During the back swing of the golf stroke the sensing means will move into the other position as a result of the upper portion of the user's power arm moving substantially away from the user's body.

Preferably the main body comprises two parts which are operatively connected together for limited movement towards and away from one another, this limited movement causing the sensing means to adopt its activated and  
5 deactivated positions.

The biasing means may be adapted to normally urge the two parts of the main body away from one another. In one form the biasing means may comprise a piece of resilient or elastic material disposed between the two  
10 parts of the main body. In another form the biasing means comprises a spring which is disposed within the main body so as to urge the two parts of the main body away from one another.

The sensing means may comprise a spring loaded  
15 switch which is mounted within the main body and is arranged so that it is normally urged into the activated position in which position it closes the electrical circuit.

The indicating means may be in the form of an aural  
20 indicator such as a buzzer or a visual indicator such as a light which is operated when the sensing means is in the activated position. The electrical circuit may further include an over-ride switch which can render the device operative or inoperative.

25 Fastening means may be provided for securing the device in position on the user's arm. Such fastening means may be in the form of an elastic strap which can be secured to the bicep of the power arm.

It will be appreciated from the foregoing that  
30 the device of the present invention provides a far more compact than that previously contemplated by applicant in his co-pending Australian patent specification 20922/83. It differs from the United States patent specification

4,193,065 in that not only is it used for an entirely different golf problem but also structurally. In particular the biasing means enables the sensing means to adopt either its activated or deactivated positions, and in the preferred form where the main body comprises two parts which are arranged for relative limited movement towards and away from each other to activate and deactivate the sensing means, this provides a suitable arrangement by which the position of the power arm relative to the body of the user can be sensed.

Preferred embodiments of the invention will hereinafter be described with reference to the accompanying drawings in which:

Figure 1 is a perspective view of one form of golf swing practice device according to the present invention;

Figures 2 and 3 are front and side views respectively of a golfer during different stages of a golf swing, the golfer having the practice device of the present invention secured to the upper portion of the power arm;

Figure 4 is a schematic view showing various component parts of the apparatus in an electric circuit; and

Figure 5 is an exploded perspective view of another form of golf practice device according to the present invention.

Referring to the drawings the golf swing practice device generally indicated at 1 comprises a main body 2 having two parts 3 and 4. The two parts of the main body have contoured side faces so that the body 2 can fit snugly between the user's power arm and body. Fastening means in the form of a strap 11 is provided

for securing the main body 2 to the user's arm.

In the embodiment shown in Figure 1, the biasing means is in the form of a piece of elastic or resilient material 5 which is disposed intermediate the two parts 3 and 4 of the main body 2. In the embodiment shown in Figure 5 the biasing means is in the form of a spring 25 which is carried on mounting post 20 and co-operating post (not shown on part 4). The two parts are secured together by means of screw 23 arranged to provide for limited movement between the two parts. A rebate 27 on one part and a corresponding portion on the other part provides for correct location of the two parts during their limited movement relative to one another.

In the embodiment shown in Figure 5 there is also provided locating pillars 17 on one part which are adapted to co-operate with sockets (not shown) on the other part.

The device 1 comprises a sensing switch 6 having a pressure sensitive button 7 located within the housing so that the pressure sensitive button 7 is responsive to relative movement between the parts of the body 2. The sensing switch 6 is in an electrical circuit which as shown in Figure 5 can be mounted to a circuit board 35. The circuit board is located by means of apertures 36 and 37 co-operating with posts 17 and 20. One example of a switch suitable for use in the present invention is a spring loaded switch of the type S.L.4096.

The indicating means may be in the form of a buzzer 8 also within the electrical circuit. One typical form of buzzer which is suitable for use in the present invention is a 20 E.B.035.

The circuit may further include an over-ride switch 14 which is readily accessible through cut-out 29 and



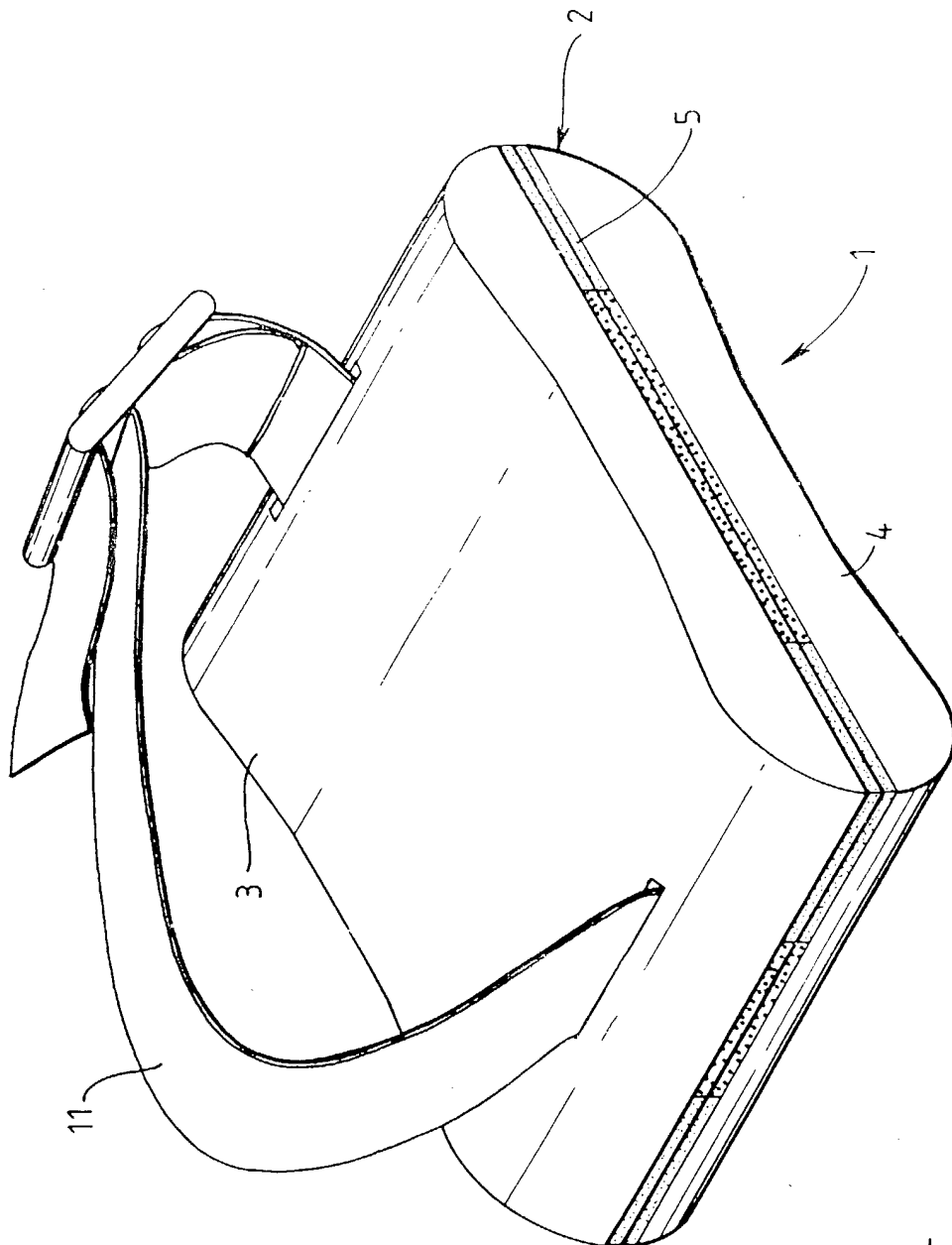
a power supply in the form of a battery 12 is also mounted within the main body.

When the device is secured to the user and the user is in the position as shown in Figure 2 the power arm is pressed firmly against the body and thereby compresses the two parts of the main body 3 and 4 together and as such urges the switch 6 into the deactivated position. The switch 6 will remain in this position unless the user's power arm moves substantially away from the body during the arc of the golf swing. If for example the user in the position shown in Figure 3 moves the power arm away from the body more than what is shown in Figure 3 the button 7 of switch 6 would be biased into the activated position whereby the circuit would be completed (provided over-ride switch 14 is closed) thereby actuating the buzzer 8. It will be appreciated that instead of a buzzer a different type of indicator such as a light could be used.

## CLAIMS:

1. A golf swing practice device comprising a main body (1) sensing means (6) operatively carried by said main body (1) and being capable of adopting either an activated position or a deactivated position, biasing means (5, 25) for causing said sensing means (6) to be normally in one of said activated or deactivated positions and indicating means (8) which provides an indication as to which of said positions said sensing means (6) is in, said sensing means (6) and said indicating means (8) being arranged in an electrical circuit.
2. A golf swing device according to claim 1 wherein said main body (1) comprises two parts (3) and (4) operatively connected together for limited movement towards and away from one another, said limited movement causing said sensing means (6) to adopt said activated and deactivated positions.
3. A golf swing practice device according to claim 2 wherein said biasing means (5) (25) is adapted to normally urge said two parts of said housing away from one another.
4. A golf swing practice device according to claim 3 wherein said biasing means (5) comprises a piece of resilient or elastic material (5) disposed between said two parts of said main body.
5. A golf swing practice device according to claim 3 wherein said biasing means (5) comprises a spring (25) disposed within said main housing.
6. A golf swing practice device according to any preceding claim wherein said sensing means 6 comprises a spring loaded switch mounted within said main body and arranged so that it is normally urged into said activated position in which position it closes the electrical circuit.

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FIG 1

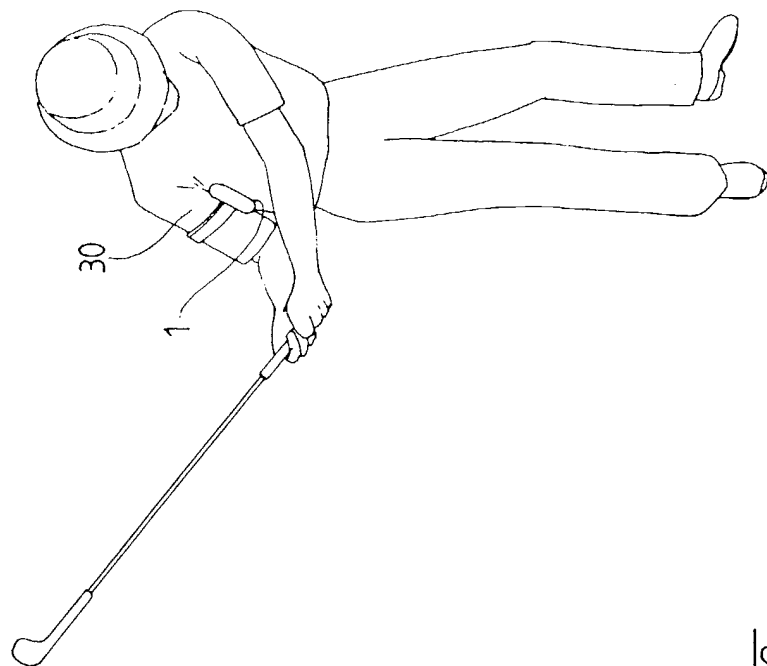


FIG 3

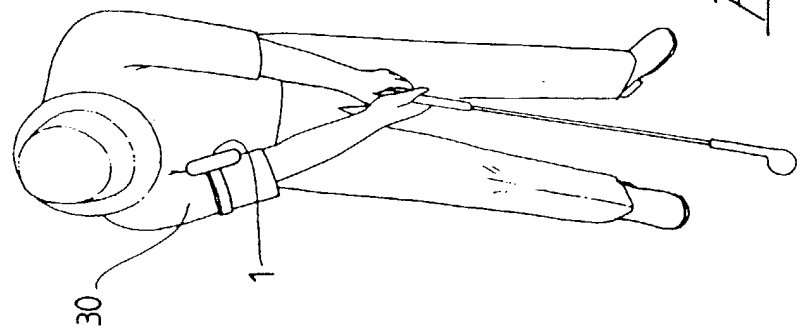
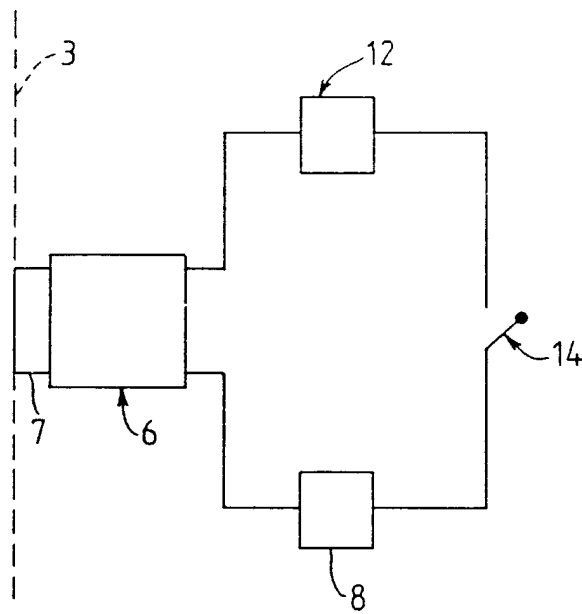
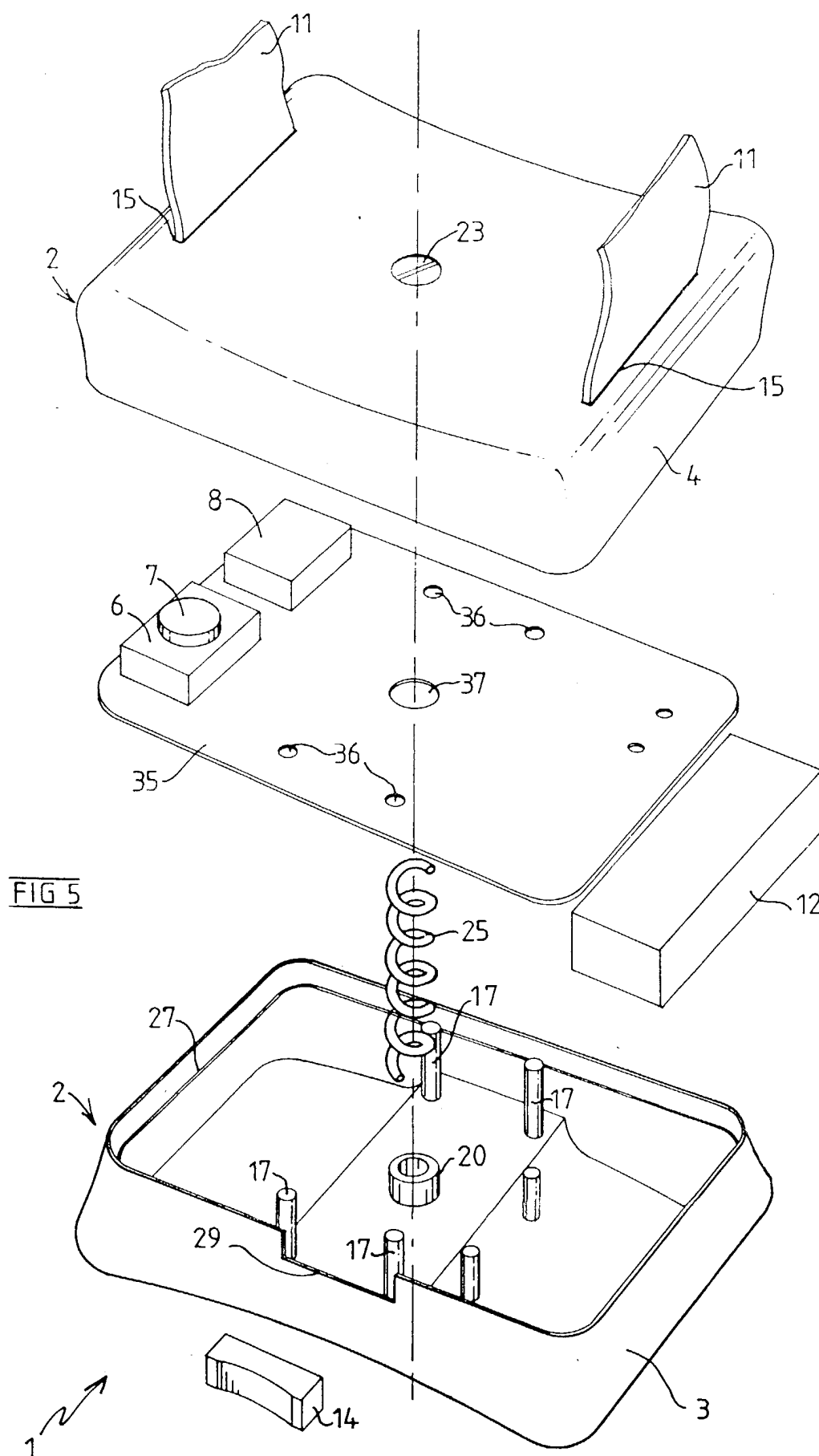


FIG 2

FIG 4



# INTERNATIONAL SEARCH REPORT

International Application No. PCT/AU 85/00059

## I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) \*

According to International Patent Classification (IPC) or to both National Classification and IPC

Int. Cl.<sup>4</sup> A63B 69/36

## II. FIELDS SEARCHED

Minimum Documentation Searched <sup>7</sup>

Classification System

Classification Symbols

IPC A63B 69/36

Documentation Searched other than Minimum Documentation  
to the extent that such Documents are Included in the Fields Searched \*

AU: IPC as above

## III. DOCUMENTS CONSIDERED TO BE RELEVANT \*

Category *	Citation of Document, <sup>11</sup> with indication, where appropriate, of the relevant passages <sup>12</sup>	Relevant to Claim No. <sup>13</sup>
X,Y	AU,B, 52876/69 (431167) (BARTHOL) 8 October 1970 (08.10.70) See pages 7-8	(1-3)(5,6)
X,Y	US,A, 3362023 (McMAHON) 2 January 1968 (02.01.68) See columns 2-3	(1-3)(5,6)
X,Y	US,A, 3243186 (JOHNSON) 29 March 1966 (29.03.66) See columns 1-2	(1-3)(5,6)
X,Y	US,A, 3767205 (MALDONADO et al) 23 October 1973 (20.10.73) See columns 4,6	(1-3)(5,6)
X,Y	US,A, 3762720 (JETT) 2 October 1973 (02.10.73) See column 1	(1-3)(5,6)
Y	US,A, 2064603 (HARRISON) 15 December 1936 (15.12.36) See columns 2-3	(1-3)(5,6)
X,Y	US,A, 2445839 (NEWMAN et al) 27 July 1948 (27.07.48) See column 2	(1-3)(5,6)
X,Y	US,A, 4193065 (BITTNER) 11 March 1980 (11.03.80) See columns 2-3	(1-3)(5,6)

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## IV. CERTIFICATION

Date of the Actual Completion of the International Search

29 May 1985 (29.05.85)

Date of Mailing of this International Search Report

(06.06.85) 6 JUNE 1985

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